dedicated channels for this purpose. However, the larger the number of dedicated channels is, the larger is the (unnecessary) storage of radio resources. For the sake of clarity, let us refer the number of channels dedicated for this purpose as N_1, i.e., the indexes of the dedicated channels run from 0, 1, 2, . . . N_1-1. The orthogonal nature of the channels may be obtained by separating the channel in a time-, a frequency-, or a code-domain, for example.

[0044] FIG. **2**A shows a possible set of channels dedicated for the broadcasting purposes. The number of channels **204**A to **218**A is eight, for example. That is, $N_1=8$. According to an embodiment, each of the channels **204**A to **218**A have equal amount of radio resources **200**, and the channels **204**A to **218**A are separated in a separation domain **202**, which may be the time-, the frequency-, or the code-domain, for example. The broadcasting node may then basically select one of the channels **204**A to **218**A for broadcasting purposes when entering the cell. The eNB may provide the node information regarding the set of channels.

[0045] FIG. **2**B shows another possible set of channels **204**B to **218**B. Here, according to another embodiment, each channel **204**B to **218**B in the set of channels is associated with a certain adjustable set of properties regarding at least one of the following: the set and format of at least one information element to be broadcasted the channel and schedule for broadcasting at least one information element on the channel. Further, amount of available radio resources on the channel may be determined by the properties of the channel. The channel **214**B has superior resources available when compared to the resources of the channel **212**B, for example. That is, when selecting a certain channel **204**B to **218**B, the node broadcasts information according to the limitations of the channel **204**B to **218**B. This may mean limitations regarding the set of information elements that can be advertised, the format of the information element that are advertised, the amount of available resources **202**, or the possibility to transmit certain information elements according to a predefined schedule, or limitations to all of the above. A channel **204**B to **218**B may also have certain resources dedicated to certain information elements, such as for the velocity, for the routing information, for the identification information, etc. The predefined schedule in a specific channel **204**B to **218**B may be such that some information is transmitted only every 40 milliseconds, whereas some information is transmitted every 10 milliseconds.

[0046] In other words, a specific channel at a specific occasion may be associated with a predefined set of properties related to the sending node through the information elements the specific channel conveys at the specific occasion. Therefore, the channel can be seen to comprise a specified format which comprises only certain predefined information elements. Each node may use the appropriate form according to the node properties it wants to advertise.

[0047] The node may obtain knowledge of the set of properties currently associated with the channels **204**B to **218**B in order to select the channel **204**B to **218**B associated with the set of properties that corresponds the most with the requirements of the node regarding the advertisement of the at least one information element. The knowledge of the channels **203**B to **218**B may be informed by the eNB of the cell via service channels or special beacon channels, or the knowledge may be predefined by the standard, for example. The requirements of the node may be derived from the characteristics and/or the state of the node. If the node has available routing capabilities, the node may select a channel **204**B to **218**B which has appropriate resources and schedule for broadcasting routing information, for example. On the other hand, if the node requires access to a certain service, the node may select a channel **204**B to **218**B which has appropriate resources and schedule for broadcasting the desire to use the service. These represent some examples of selecting the channel according to the characteristics and/or state of the node.

[0048] Further, the nodes may be defined by profiling them according to the relevant information elements the node comprises related to the characteristics and the state of the node. The profiles may distinguish a fast moving node from a fixed node, a relay node or a base station, for example. The various profiles may comprise different information elements. The length of a certain information field associated with the same information element may be different in two profiles and/or the effective resolution of the physical values may be different for the two profiles. As a consequence, a node with a certain profile, may select a channel with certain properties. The node may then cause a broadcast of node information on the selected channel according to the properties currently associated with the selected channel.

[0049] The node may reselect a new channel associated with the correct profile once the characteristics of the node and/state of the node have changed such that the profile or properties associated with the node's current channel are no longer appropriate. The node may release its current channel when the new channel is in effect. The node may further advertise its new channel in a kind of termination message on the current, to-be-released channel.

[0050] Alternatively or in addition, the node may release its beacon channel once the node has reached a stable communication configuration which fully satisfies the service requests of the node and exhausts the routing or relaying capabilities of the node. The UE, or the node, in this state will no longer need to advertise its service requests and routing capabilities or any other characteristics to other nodes on the channel but may exchange such information to a certain extent on dedicated channels with the attached nodes.

[0051] According to an embodiment, the information elements of the node's properties are combined in the broadcasts by exploiting correlations between basic information elements which are typically valid for nodes associated with a certain profile.

[0052] As mentioned, according to an embodiment, the node may select the occasion for applying the selected channel for broadcasting. Let us consider this with more details. The occasion may be chosen from a set of occasions and the selection may be performed on the basis of the characteristics of the node or the state of the node, or on the basis of both of the above. FIG. **3** shows a time line **300** comprising a plurality of occasions **312** to **330**. It should be noted that also occasions marked with vertical line are valid occasions even though not marked with a reference numeral for the sake of clarity. The occasion denotes a point of time when the broadcast is transmitted.

[0053] The period between occasions **312** and **314**, between **314** and **316**, and between **316** and **318** is T_0 **302**. The time period from one occasion to the next occasion is referred as Ti **304**. Each node in the D2D network may